

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application.

Claims 1-15 and 23-26 are now present in this application. Claims 1, 8, 10, 12 and 23 are independent.

Reconsideration of this application is respectfully requested.

Rejection Under 35 U.S.C. § 102

Claims 1-6, 8, 12-15, 24 and 26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 3,544,518 to Bodkins et al. ("Bodkins"). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

A prior art reference anticipates the subject matter of a claim when that reference discloses every feature of the claimed invention, either explicitly or inherently. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed Cir. 1997). While, of course, it is possible that it is inherent in the operation of the prior art device that a particular element operates as theorized by the Examiner, inherency may not be established by probabilities or possibilities. What is inherent, must necessarily be disclosed. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) and

In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

A claim limitation is inherent in the prior art if it is necessarily present in the prior art, not merely probably or possibly present. Rosco v. Mirro Lite, 304 F.3d 1373, 1380, 64 USPQ2d 1676 (Fed. Cir. 2002). The dispositive question regarding anticipation is whether one skilled in the art would reasonably understand or infer from the prior reference's teaching that every claim feature or limitation was disclosed in that single reference, Dayco Products, Inc. v. Total Containment, Inc., 329 F.3d 1358, 1368, 66 USPQ2d 1801 (Fed. Cir. 2003).

During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

If the PTO fails to meet this burden, then the applicant is entitled to the patent. However, when a *prima facie* case is made, the burden shifts to the applicant to come forward with evidence and/or argument supporting patentability.

Claims 1-6, 8, 12-15, 24 and 26 positively recite a combination of features including a flow accelerating material means provided on the inner walls of both the fixed mold and the movable mold that form the molding space for increasing insulation of the fluid and reducing a flow resistance between the inner walls and the fluid so as to accelerate the flow of the fluid injected into the injection mold. That is, by the claimed invention, the flow accelerating means increases insulation of the fluid as well as reduces a flow resistance between the inner walls and the fluid so as to accelerate flow of the fluid. Bodkins does not disclose this claimed combination of features, either explicitly or inherently.

In this regard, Bodkins' "insulating" material (3, 3') reduces the heat transfer between a metal surface having relatively low temperature, and a plastic resin that has a relatively high temperature, to prevent the surface of the plastic resin from being cooled too rapidly. However, this is not what is being claimed. The claimed flow accelerating material increases the insulation of the fluid, which is not the same using an insulating material to increase the insulation between the fluid and the mold to prevent the surface of the mold from being cooled too rapidly.

In other words, Bodkins is not directed to the claimed invention in this regard.

Furthermore, there is no explicit or inherent (i.e., not just possibly disclosed, and not just probably disclosed, but necessarily disclosed) teaching in Bodkins that its heat insulating material (3, 3') is a flow acceleration material, as claimed.

Additionally, because the heat transfer rate improves as the relative speed of heat transfer between the target items is increased, in order to reduce the heat transfer performed by Bodkins' insulating material (3, 3') between the low-temperature metal surface and the high-temperature plastic resin, the flow characteristics of the plastic resin would be expected to be reduced because the resin would be expected to likely become thicker as it cools. Consequently, the flow inducing characteristics of Bodkins insulating material (3, 3') would be expected to teach away from achieving the claimed invention and to impart opposite characteristics to the molding fluid that those claimed.

Further, just because Bodkins states that its finished plastic product has a smooth surface, this does not support a conclusion that it is due to improved flow characteristics imparted to the molding fluid when a number of parameters can contribute to this result including, for example,

the molding material itself, the speed at which the molding material is injected into the mold, the fact that Bodkins cools its mold, the temperature differential between the molding material in the mold and the molding material when it is injected, whether laminar or turbulent flow of the mold fluid occurs at all, or for a specific time period, etc. In other words, the inherent disclosure of flow accelerating means in Bodkins is speculative at best and clearly is not supported as is required in the case law cited above to make out a *prima facie* case of inherency of such a positively recited feature.

Additionally, it appears that the thrust of Bodkins disclosure, is that its mold halves with insulators is to increase the surface temperature of a molded product and that if the thrust of Bodkins was to increase insulation of the fluid and reduce flow resistance, that would have been mentioned. However, no mention of increased insulation of the fluid and reduce flow resistance is mentioned by Bodkins.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention based on Bodkins.

Reconsideration and withdrawal of this rejection of claims 1-6, 8, 12-15, 24 and 26 are respectfully requested.

Claims 1-12, 15 and 24-26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,225,109 to Yotsutsuji et al. ("Yotsutsuji"). This rejection is respectfully traversed.

Claims 1-12, 15 and 24-26 positively recite a combination of features including a flow accelerating material means provided on the inner walls of both the fixed mold and the movable

mold that form the molding space for increasing insulation of the fluid and reducing a flow resistance between the inner walls and the fluid so as to accelerate the flow of the fluid injected into the injection mold. That is, by the claimed invention, the flow accelerating means increases insulation of the fluid as well as reduces a flow resistance between the inner walls and the fluid so as to accelerate flow of the fluid. Yotsutsuji does not disclose this claimed combination of features.

In this regard, Yotsutsuji's metal layer 12 is heated immediately by the molten resin when molten resin is charged into the cavity 2 and Yotsutsuji's heat insulating layer 12, provided on the metal layer 12, prevents release of the heat from the metal layer so as to improve the transfer of the molten resin. In other words, Yotsutsuji's insulating layer is only disclosed as a heat insulating layer. However, Yotsutsuji's metal layer 12 is not disclosed by Yotsutsuji to reduce a flow resistance between the molding surface 11 and the molten resin, as claimed.

In this regard, Applicants note that not only is there no explicit disclosure of this claimed feature, but the Office Action fails to present objective factual evidence that Yotsutsuji discloses such a feature inherently (i.e., not just possibly, and not just probably, but necessarily).

Accordingly, the Office Action fails to make out a *prima facie* case of anticipation of the subject matter recited in independent claims 1, 8, 10, and 12. The dependent claims are not anticipated by Yotsutsuji, at least for the above reasons.

Accordingly, reconsideration and withdrawal of this rejection of claims 1-12, 15 and 24-26 under 35 USC §102(b) as being anticipated by Yotsutsuji are respectfully requested.

Claims 1-3, 5, 12-15, 24 and 26 stand rejected under 35 U.S.C. § 102(b) as being clearly anticipated by U.S. Patent 4,201,742 to Hendry et al. ("Hendry"). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Independent claims 1 and 12, as amended, recite a combination of features including a flow accelerating material means provided on the inner walls of both the fixed mold and the movable mold that form the molding space for increasing insulation of the fluid and reducing a flow resistance between the inner walls and the fluid so as to accelerate flow of the fluid injected into the injection mold. That is, by the claimed invention as recited in claims 1, 8, 10 and 12, the flow accelerating means increases insulation of the fluid as well as reduces a flow resistance between the inner walls and the fluid so as to accelerate flow of the fluid. Hendry does not disclose this claimed combination of features.

For example, Hendry's thin layer of Teflon acts as a thermo-barrier so that the heat of the plastic is retained at the surface of the mold until the desired finish on the molded part is obtained. However, Hendry does not disclose that its thin layer of Teflon reduces a flow resistance between the mold surface 11 and the molten resin, as claimed.

In this regard, Applicants note that not only is there no explicit disclosure of this claimed feature, but the Office Action fails to present objective factual evidence that Hendry discloses such a feature inherently (i.e., not just possibly, and not just probably, but necessarily).

Accordingly, the Office Action fails to make out a *prima facie* case of anticipation of the subject matter recited in independent claims 1, 8, 10 and 12. Dependent claims 2, 3, 5 and 13-15 are not anticipated by Hendry at least for the above reasons, and for their added features.

Accordingly, reconsideration and withdrawal of this rejection of claims 1-3, 5, 12-15, 24 and 26 under 35 USC § 102(b) as being anticipated by Hendry are respectfully requested.

Claims 1-3, 8, 12 and 15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,362,226 to Kataoka et al. ("Kataoka"). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

The Office Action asserts that Kataoka discloses the claimed same flow accelerating material means provided on the inner walls of both the fixed mold and the movable mold that form the molding space for increasing insulation of the fluid and reducing a flow resistance between the inner walls and the fluid so as to accelerate flow of the fluid injected into the injection mold, in col. 1, lines 45-55. Applicants respectfully disagree. In Col. 1, lines 45-55, Kataoka merely discloses providing a heat insulating layer for greatly reducing the cooling rate of the heated and injected resin. This is not a disclosure, either explicit or inherent, of the aforementioned claimed feature of this invention.

Moreover, the Office Action fails to present objective factual evidence that Kataoka discloses this claimed feature inherently (i.e., not just possibly, and not just probably, but necessarily).

Accordingly, the Office Action fails to make out a *prima facie* case of anticipation of the subject matter by Kataoka at least for the above reasons.

Accordingly, reconsideration and withdrawal of this rejection of claims 1-3, 8, 12 and 15 under 35 USC § 102(b) as being anticipated by Kataoka are respectfully requested.

Reply to Examiner's Response to Arguments

Yotsutsuji, Hendry, Kataoka and Bodkins rely on thermal effects instead of on flow accelerating material, as recited. If they relied on a flow accelerating material, they would have disclosed it. However, these skilled workers contain no disclosure of using a flow accelerating material, as claimed.

Information Disclosure Statement

Applicants thank the Examiner for considering the Information Disclosure Statement (IDS) filed on December 28, 2006 for providing Applicants with an initialed copy of the Form PTO/SP/08 filed with the IDS.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response

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has been made to the outstanding Office Action, and as such, prosecution should be reopened, and that claims 16-18, as well as claims 1, 8, 10 and 12-15, should be allowed.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

Applicants respectfully petition under the provisions of 37 C.F.R. § 1.136(a) and § 1.17 for a one-month extension of time in which to respond to the Examiner's Office Action.

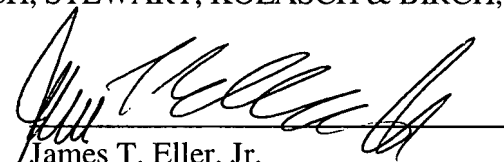
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Date: September 7, 2007

Respectfully submitted,

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